

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004461**Date Inspected:** 01-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Hu Wei Qing**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG & Tower**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

OBG Sub-Assembly Bay 1:

The QA Inspector randomly observed 6 ZPMC welders ID's 201840/059400 (Weld Joint Numbers (WJ) 001/002), 201788/059421 WJ's 9WJ's 001/002) and 059445/059403 WJ's 009/010), utilizing the Submerged Arc Welding (SAW) in the 2G/2F on Gantry 1 with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2342-U1(U-Rib)-4 to weld U_Ribs to Deck Plate 9EW-DP234-001 (5 Rib panel). The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Sun Wei, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 685/689 amps, 25.2/25.1 volts WJ's 001/002, 683/687 amps, 25.3/24.9 volts WJ's 005/006, 688/691 amps, 24.8/25.5 volts WJ's 009/010 with a travel speed of 520 millimeters (mm) per minute for all welds. Weld parameters appeared to comply with contract requirements. SAW 2G/2F DP234-001 (9EW) 6 welders.

OBG Sub-Assembly Bay 2:

The QA Inspector randomly observed that no contract work was being performed in Bay 2.

OBG Sub-Assembly Bay 3:

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The QA Inspector randomly observed ZPMC welders ID's 04886 (WJ's 014/013), 055702 (WJ's 018/017) and 051246 (WJ's 022/021) utilizing Gantry 1 with the FCAW in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2132-3 to weld T-Ribs to SP343-001. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 3 ZPMC welders utilizing Gantry 2 with the FCAW in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2132-3 to weld T-Ribs to Side Plate SP621-001 at WJ's 003/004, 007/008 and 011/012. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Wu Ming Kai monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

OBG Sub-Assembly Bay 4:

The QA Inspector randomly observed ZPMC Non-Destructive Testing (NDT) Technician Zhou Dong Yun, utilizing the Magnetic Particle Testing (MT) Method to perform a final MT examination of the cover pass of all the welds on Side Plate Sub-Assembly SP129-00 WJ's 013 through 024 and 056 through 067. There appeared to be no indications and ZPMC QC accepted all the above listed welds.

The QA Inspector performed a 10% final Visual (VT) and MT verification on the cover pass of all the welds on Side Plate Sub-Assembly SP129-00 WJ's 013 through 024 and 056 through 067 (Green Tag 001463). There appeared to be no indications the QA Inspector accepted all of the above listed welds.

OBG Sub-Assembly Bay 7:

The QA Inspector randomly observed ZPMC welder Hong Shuili ID 048815, utilizing the FCAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2232-TC-U4b-F, to weld the 30 mm thick web plate in the slot in Flange X7M on Floor Beam Wing Diaphragm FB012-016 at WJ 043. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Hu Wei Qing, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

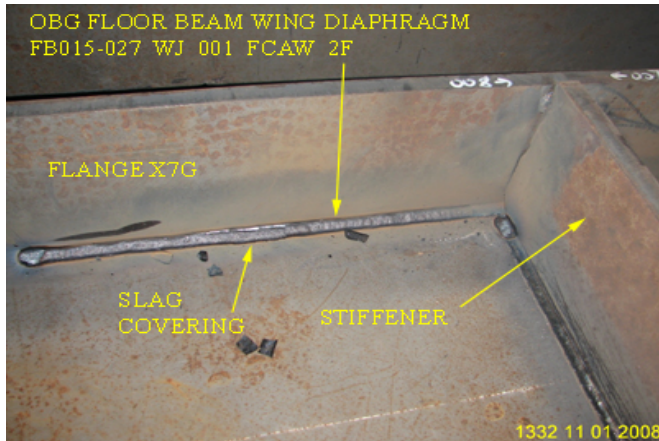
The QA Inspector randomly observed ZPMC welder Hu Fen Jian ID 067877, utilizing the FCAW Process with a tracker in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-2132-3, to weld Flange X7G to Floor Beam Wing Diaphragm FB015-027 at WJ 001. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Hu Wei Qing, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

OBG Sub-Assembly Bay 8:

The QA Inspector randomly observed 4 ZPMC welders utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position to tack weld Web Plates p1440 and p1139 to 65M (S) Lower Tower Diaphragm SA325 at WJ's SSD1-SA244B/B-7/8 and SSD1-SA244B/B-1/2. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Liu Hua Jie, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

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Summary of Conversations:

There were no relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Josh Ishibashi 13764716411, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Wright,Mark

QA Reviewer